

- . 1970b. Scanning electron microscopy of *Solenopotes capillatus* Enderlein (Anoplura: Linognathidae). Jour. N.Y. Ent. Soc., **78**: 139-145.
- . 1971. Scanning electron microscopy of antennal structures of five *Haematoponus* (Anoplura: Haematoponidae). Jour. N.Y. Ent. Soc., **79**: 19-26.
- ROSS, H. H. 1956. A textbook of Entomology, 2nd ed., p. 254. John Wiley and Sons, Inc. New York.
- SLIFER, E. H. 1960. A rapid and sensitive method for identifying permeable areas in the body wall of insects. Ent. News, **71**: 179-182.
- . 1970. The structure of arthropod chemoreceptors. Ann. Rev. Ent., **15**: 121-142.

BOOK REVIEW

Insect Diseases. George E. Cantwell, ed. 2 volumes. 595 pp. + 21 pp. glossary. Marcel Dekker, New York. \$54.00. 1974.

Interest in insect diseases has increased in recent years. The primary reason for it is the attention given insect pathogens as potential biological control agents. The resistance of insect vectors of disease agents and of agricultural pests to chemical insecticides, coupled with the public awareness of the environmental pollution and the concern about the continuous use of chemical insecticides made the large scale uses of "living insecticides" a reality. There is now a definite need for modern, comprehensive descriptions of insect pathogens and diseases, for students in colleges and universities as well as for researchers. The scholarly treatment of this subject by the late Prof. Steinhaus is partly outdated and the remaining copies of the classic 2 volumes are quite expensive. Cantwell's volumes are concise but also expensive, even though the books have been produced from non-justified typescripts by camera copy. The first volume contains 5 chapters: Diagnostic Techniques by G. M. Thomas; Virus and Rickettsial Diseases by J. L. Vaughn; Bacterial Diseases by R. M. Faust; Mycoses by J. N. Bell, and Protozoan Infections by W. M. Brooks. The six chapters of the second volume comprise: Symbiology-Mutualism between Arthropods and Microorganisms, by G. M. Boush and H. C. Coppel; Nematode Infections by N. R. Nickle; Radiation, Neoplasms, Carcinogenic Chemicals, and Insects by J. C. Harshberger; Hormonal-induced Pathologies by W. F. Walker; Genetic Pathology by P. J. Bryant; and Honey Bee Diseases, Parasites, and Pests by G. E. Cantwell. The fact that one has to look for the index to the first volume at the end of the second indicates that these volumes were prepared as a single book, then split arbitrarily, disregarding the need for separate indices. Apart from this inconvenience, the volumes provide a useful introductory text covering the entire field of insect pathology for undergraduate and graduate entomology students. The inclusion of nearly 2 dozen laboratory exercises provides a handy guide to tests that were chosen so as to require only simple equipment. Each chapter is followed by an extensive bibliography. The overview of various areas of insect pathology is good and the text can be recommended for an introductory level course.

KARL MARAMOROSCH

Waksman Institute of Microbiology, Rutgers University